

## REVISION OF AUSTRALIAN LEPIDOPTERA—LIPARIDAE.

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Whatever the cause, the study of the Bombycine Families of Lepidoptera has been strangely neglected. No revision of the world-fauna of these groups has appeared, although from the smaller number of species this would be an easier task than it has been with the *Noctuidae*, *Geometridae*, *Pyralidae*, *Tortricidae*, and *Tineidae*. A revision of the genera is badly needed, and there has been even considerable confusion as to the families. This perhaps is one of the reasons why they have been neglected, though it has been to a large extent removed by the researches of Sir G. Hampson, published in the first volume of his Catalogue of the Lepidoptera Phalaenae and in his Moths of India. Another difficulty with regard to the Australian species is that so many of them have been described by authors innocent of morphological knowledge, and are therefore difficult of recognition. Fortunately, I have been able to examine many Australian types in the British Museum, and nearly all of the older species have now been identified, and can be referred to their right positions. Since then I have examined not only my own collection and that of the Queensland Museum, but also many specimens sent to me by Mr. George Lyell, of Victoria, by Mr. J. A. Kershaw from the National Museum, Melbourne, and by Mr. A. M. Lea from the South Australian Museum. Thanks to their generous help, and to the permission of the Directors of these Museums, a very large amount of material has been available for the purposes of this paper.

## Family LIPARIDAE.

This family has also been known as the *Lymantriadae*. The older name was abandoned under the impression that the generic name *Liparis* Ochs. was preoccupied, but it appears that this preoccupation was pre-Linnean, and consequently inoperative. Formerly I enlarged the conception of the family (Trans. Ent. Soc., 1904, p. 470) to include the *Hyppsiidae* and *Anthelidae* as subfamilies, but I am now of opinion, for reasons which will be given presently, that the three groups are better regarded as three families.

The *Liparidae* may be defined as follows:—Tongue absent. Antennae bipectinate to apex in ♂, and nearly always in ♀ also. Head, thorax, abdomen, and femora hairy. Forewings with 1 (usually known as 1c) absent, 5 approximated to 4 at origin, 8 and 9 always stalked, either from cell or areole. Hindwings with frenulum present: 1 absent, discocellulars angled, 5 arising from below angle and approximated to 4, 6 and 7 usually stalked, 8 approximated and usually connected with cell somewhere between  $\frac{1}{3}$  and middle, rarely anastomosing.

The absence of a tongue, the approximation of the origin of the second branch of the median (vein 5) to the cubitus, and the connection of the subcostal of the hindwing with the cell about its middle, are sufficient to distinguish this family. In all these respects except the first it agrees with the *Hypsiidae*. Its next nearest ally is the *Noctuidae*, the distinguishing point, apart from the presence of a tongue, being that in the latter the subcostal anastomoses with the cell in the hindwing near its base. This basal anastomosis is present in the genus aptly named by Meyrick *Haploipseustis* (for it is an evident deceiver), as to whose correct position there has been some difference of opinion. The presence of a tongue, although short and weakly developed, confirms the conclusion that *Haploipseustis* belongs to the *Noctuidae*; for, although the presence of a tongue in a primitive genus of *Liparidae* would be a not impossible discovery, the venation of the forewing of *Haploipseustis* shows that it is not primitive. The connection between the hindwing cell and subcostal in this and other families is really due to the persistence of the first branch of the radial, which has been shortened by their approximation. Sometimes the vein is not distinctly developed between the approximated points, or there may be an actual anastomosis as in *Acyphas*. In the more primitive genera a typical areole is present as in most *Noctuidae*. In many cases this has been lost by coalescence, leaving 7, 8, 9, 10 stalked, an intermediate condition being preserved in the African genus *Lacipa*, which has a small areole from which proceeds the common stalk of these veins. But the areole may also be lost by the obsolescence of the base of vein 9, leaving 10 disconnected, as sometimes occurs in *Iropoca*. In *Redoa* the areole becomes long and narrow, the allied *Leucoma* from Europe and *Euzora* differ from this in 10 having become disconnected. There is a tendency in this family for the obsolescence of the wings in the ♀; this occurs in three of our genera (*Euome*, *Orgyia*, *Iropoca*).

The family is a fairly large one, and in Australia there are 60 species, which I refer to 18 genera. This is a larger number of species than is found in the Palaearctic region, and in the Nearctic region the family is still more poorly represented. On the other hand Hampson's Moths of India contains a larger number, and Janse's check-list of the Moths of South Africa records twice as many species. The group is most developed in warm regions, and most of our species are from the coasts of North Australia, Queensland and New South Wales. Only seven species (*Porthesia*, *Oligeria*, *Acyphas*, *Orgyia*) come from South-east Australia, and only two (*Acyphas*, *Orgyia*) come from the South-west of the continent. Our genera may be divided into three or four natural groups:

1. Those with a normal areole, *Laelia*, *Dasychira*, *Olene*, *Orgyia*, widely distributed genera, which are very scantily represented here, together with the monotypical *Iropoca* and *Aziologa*.

2. A small group in which the areole tends to obsolescence, first by becoming long and narrow as in *Redoa*, and then by 10 becoming disconnected as in *Euzora* and in the exotic genus *Leucoma*. Of this we have only two species.

3. A much larger group in which the areole has disappeared by coalescence, leaving 7, 8, 9, 10 stalked. This may be divided into (a) the *Lymantria* group, containing also *Euome* and *Dura*, and (b) the *Euproctis* group containing also *Heracula*, *Habrophylla*, *Acyphas*, *Oligeria*, *Porthesia*, and *Icta*. This last is the only group at all largely represented in Australia, where it comprises three-fifths of the whole number of species.



before angle, 4 and 5 connate from angle, 6 from upper angle nearly connate with 7, 7, 8, 9, 10 stalked, 11 from shortly before angle; discocellulars strongly angled inwards, hindwings nearly as broad as forewings but much shorter; cell very long ( $\frac{1}{2}$ ), discocellulars strongly oblique, 2 from  $\frac{2}{3}$ , 3 and 4 stalked from angle, 5 curved at base and somewhat approximated to 4, 6 and 7 stalked from upper angle, 8 anastomosing or connected with cell about middle.

An isolated genus with curiously elongate forewings and abbreviated hindwings, almost zygaeniform.

Head orange . . . . . *fulviceps*.  
 Head blackish . . . . . *tanaopsis*.

1. ICTA FULVICEPS.

*Icta fulviceps* Wlk., List Lep. Brit. Mus., iv., p. 922.

♂. 28-29 mm. Head brownish-orange. Palpi  $\frac{1}{2}$ ; brownish-orange. Antennae brownish-orange; pectinations in ♂ 9. Thorax dark-fuscous; tegulae and extreme bases of patagia brownish-orange. Abdomen dark-fuscous; tuft brownish-orange. Legs ochreous; middle and posterior femora and tibiae mostly fuscous. Forewings narrow-elongate, costa straight to near apex, there gently arched, apex rounded, termen very obliquely rounded; fuscous; costal edge narrowly ochreous; cilia fuscous. Hindwings about  $\frac{2}{3}$  length of forewings, termen rounded; fuscous; cilia fuscous.

Two examples in the British Museum, one labelled "Australasia," the other "New Holland." The locality requires confirmation, but probably like the following, it comes from the north of the continent.

2. ICTA TANAOPSIS, n.sp.

τανναοπισ, elongate.

♂. 30 mm. Head, palpi, and thorax blackish. Antennae blackish; pectinations in ♂ 10. Abdomen reddish-orange; basal segment, a median dorsal line, and underside blackish. Legs blackish. Forewings elongate, spatulate, costa sinuate, slightly concave to  $\frac{2}{3}$ , then arched, apex rounded, termen very obliquely rounded, termen as long as dorsum; blackish; cilia blackish. Hindwings short, about  $\frac{2}{3}$  length of dorsum of forewing, termen rounded, tornus somewhat projecting; thinly scaled; fuscous; on dorsum pale-ochreous; cilia fuscous.

Type in National Museum, Melbourne.

N.Q.: Claidie River, in February; one specimen taken by Mr. J. A. Ker-shaw.

Gen. 2. PORTHESIA.

*Porthesia*, Stph., Ill. Brit. Ent., ii., 1829, p. 65.

Palpi moderate, porrect; second joint sometimes hairy beneath; terminal joint very short. Thorax and abdomen without crests; tuft large, especially in ♀. Posterior tibiae with two pairs of spurs. Forewings without areole; 7, 8, 9, 10 stalked, 7 arising from before 10, 6 connate or short-stalked with the preceding veins. Hindwings with discocellulars angled, 3 and 4 coincident, 5 approximated or connate, 6 and 7 stalked, 8 closely approximated to cell near or beyond middle, and connected with it.

Type, *P. similis* Fuesl. from Europe.



These particulars were noted from the British Museum type. I have seen no other example.

Q.: Peak Downs.

#### 7. PORTHESIA GALACTOPIS.

*Porthesia galactopis*, Turn., Trans. Roy. Soc. S. Aust., xxvi., 1902, p. 176.

N.Q.: Prince of Wales Island, Cairns, Mareeba, Townsville; Q.: Gayndah, Brisbane, Southport, Coolangatta.

#### 8. PORTHESIA RUTHOPTERA, n.sp.

ζοοπτερος, tawny-winged.

♂. 24 mm. ♀. 28-38 mm. Head, thorax, palpi, antennae, abdomen and legs ochreous. Forewings triangular, rather narrow, termen strongly oblique; ochreous without markings; cilia ochreous. Hindwings similar, in ♂ paler.

Differs from the following in the sexes being of the same colour.

N.Q.: Kuranda, near Cairns, one ♀ received from Mr. F. P. Dodd; Stanary Hills, one ♂, two ♀ received from Dr. T. Baneroff.

#### 9. PORTHESIA FIMBRIATA.

*Teara fimbriata*, Luc., Proc. Linn. Soc. N.S. Wales, 1891, p. 285; *Porthesia fimbriata*, Turn., Trans. Roy. Soc. S. Aust., xxvi., 1902, p. 176.

The primary character given in the tabulation suffices to distinguish only the typical form of the ♂. There is another form nearly as common, which has the forewings wholly ochreous. This can be distinguished from *ruthoptera* by the forewings being proportionately broader, with less oblique termen. The ♀ is whitish, has narrower forewings, and can scarcely be distinguished from *galactopis*.

Q.: Stradbroke Island, Coolangatta. Attached to *Banksia serratifolia*.

#### 10. PORTHESIA ACATHARTA.

*Porthesia acatharta*, Turn., Trans. Roy. Soc. S. Aust., xxx., 1906, p. 124.

Termen of forewing with long spatulate ochreous scales.

N.A.: Port Darwin; N.Q.: Cairns.

#### 11. PORTHESIA TRISPILA, n.sp.

τρισηπιδος, three-spotted.

♂. 25-27 mm. Head, palpi, and antennae pale-ochreous. Thorax and abdomen ochreous. Legs whitish-ochreous. Forewings triangular, costa moderately arched, apex rounded, termen bowed, oblique; pale-ochreous irrorated, except towards costa, with brown-fuscous; absence of irroration leaves two transverse lines and three terminal spots; first line from  $\frac{1}{2}$  costa to beyond  $\frac{1}{2}$  dorsum, at first outwardly-curved, then sinuate; second line from  $\frac{2}{3}$  costa to beyond  $\frac{2}{3}$  dorsum, similar in form to first line; large pale-ochreous spots at apex, above mid-termen, and above tornus; cilia pale-ochreous, bases whitish, barred with fuscous on mid-termen and tornus. Hindwings and cilia whitish. Underside whitish.

N.Q.: Kuranda, near Cairns; two specimens received from Mr. F. P. Dodd.



## 12. PORTHESIA MELAMBAPHES, n.sp.

μελαμβαφης, dark-eyed.

♂. 28 mm. Head and thorax fuscous, with some ochreous hairs. Palpi and antennae fuscous. Abdomen dark-fuscous, tuft and underside ochreous. Legs ochreous mixed with fuscous. Forewings triangular, costa gently arched, more strongly so near base, apex rounded, termen slightly bowed, oblique; ochreous, thickly irrorated with dark-fuscous; a large basal patch mostly fuscous; a suffused, fuscous, subterminal band with an acute, median, posterior tooth; cilia fuscous, apices partly ochreous. Hindwings with termen rounded; deep ochreous, with slight fuscous irroration; cilia ochreous, with some fuscous admixture. Underside ochreous.

Type in Coll. Lyell.

Vic.: Ocean Grange, near Sale, in March; one specimen.

## 13. PORTHESIA LUTEA.

*Bombyx lutea*, Fab., Syst., Ent., p. 574; *Artaxa chrysophila*, Wlk., List Lep. Brit. Mus., xxxii., p. 334; *Artaxa iobrota*, Meyr., Trans. Roy. Soc. S. Aust., xv., 1891, p. 194.

♂. 23-32 mm. ♀. 32-36 mm. Head, thorax, and abdomen orange-yellow, rather paler in ♀. Palpi pale-ochreous, apices fuscous. Antennae orange-yellow, paler in ♀, pectinations fuscous. Legs orange-yellow; tarsi pale-ochreous. Forewings broadly triangular, more elongate in ♀, costa moderately arched, apex rounded, termen slightly oblique; orange-yellow, paler in ♀; two whitish, slightly denticulate, transverse lines, rarely obsolete; first from  $\frac{1}{3}$  costa to  $\frac{1}{3}$  dorsum, angled outwards above middle; second from  $\frac{2}{3}$  costa to  $\frac{2}{3}$  dorsum outwardly curved, slightly sinuate towards dorsum; cilia orange-yellow. Hindwings and cilia orange-yellow.

*Iobrota* is a much darker form, the forewings ochreous-brown, the hindwings fuscous. Intermediate examples occur.

N.A.: Pt. Darwin; N.Q.: Cairns, Atherton, Stannary Hills, Dunk Island, Ingham, Townsville; Q.: Rockhampton, Gympie, Nambour, Brisbane, Stradbroke Island. Also from New Guinea.

## Gen. 3. OLIGERIA, n.gen.

ολιγηριος, small.

Palpi minute. Antennae in ♂ short (less than  $\frac{1}{2}$ ), strongly bipectinate to apex. Posterior tibiae without middle spurs. Forewings without areole, 9 absent (coincident with 8), 7, 8, 10 stalked, 10 arising before 7. Hindwings with 3 and 4 connate or stalked, 5 separate, 6 and 7 stalked, 8 anastomosing with cell from before middle to  $\frac{2}{3}$ .

A development of *Acyphas* distinguished by the minute palpi and loss of middle-spurs.

## 14. OLIGERIA HEMICALLA.

*Orgyia hemicalla*, Low., Trans. Roy. Soc. S. Aust., xxix., 1905, p. 176.

♂. 18-20 mm. Head dark-fuscous; face ochreous. Antennae, thorax, and abdomen dark-fuscous. Legs fuscous; tibiae and tarsi ochreous. Forewings tri-

angular, costa gently arched, apex rounded, termen bowed, strongly oblique, longer than dorsum; dark-fuscous; cilia ochreous. Hindwings rather short, termen slightly rounded; orange; basal half fuscous, the line of junction irregularly dentate; cilia orange. Underside similar.

N.S.W.: Sydney; two specimens received from the late Mr. Masters. As they were taken many years ago and bore no labels, the locality needs confirmation. Vic.: Melbourne.

Gen. 4. ACYPHAS.

*Acyphas*, Wlk., List Lep. Brit. Mus., iv., p. 798; Kirby, Cat. Moths, i., 1892, p. 472; *Anepa*, Swin., Trans. Ent. Soc., 1903, p. 478.

Palpi short, porrect; second joint sometimes hairy beneath; terminal joint minute. Thorax and abdomen without crests; tuft large, especially in ♀. Posterior tibiae with two pairs of spurs. Forewings without areole, 9 absent (coincident with 8), 7, 8, 10 stalked, 10 arising before 7, 6 approximated, connate, or short-stalked. Hindwings with discocellulars angled, 3, 4, 5 separate, 6 and 7 stalked, 8 anastomosing with cell from  $\frac{1}{2}$  to  $\frac{3}{4}$  or beyond.

Type, *A. fulviceps* Wlk.

The three genera *Porthesia*, *Acyphas*, and *Habrophylla* are doubtless derivatives of *Euproctis*, which they resemble in general appearance, but there are important structural differences. *Acyphas* is different from *Euproctis* in the venation of both wings, and there is room for one or more intermediate genera. The first species ascribed to this genus by Walker appears to be an *Orgyia*, but I opine that the type was fixed by Kirby, and Swinhoe's name comes too late. Although *Acyphas* is at present known only from Australia, it is not improbable that it will be found to have a wider distribution, when the Indo-Malayan species referred to *Euproctis* are critically examined.

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|-------------------------------------------------------------------------------------------------------------------|----|
| 1. Wings white with or without markings . . . . .                                                                 | 2. |
| Wings not white . . . . .                                                                                         | 4. |
| 2. Forewings in ♂ wholly white . . . . .                                                                          | 3. |
| Forewings in ♂ not wholly white . . . . .                                                                         | 3. |
| 3. Forewings in ♂ with a subterminal ochreous line . . . . .                                                      |    |
| Forewings in ♂ with a tornal fuscous spot, or with more or less fuscous suffusion at least on underside . . . . . |    |
| 4. Wings ochreous or orange . . . . .                                                                             |    |
| Wings fuscous . . . . .                                                                                           |    |

*chionitis*,  
*leptotypa*,  
*leucomelas*,  
*amphideta*,  
*fulviceps*.



15. ACYPHAS CHIONITIS.

*Euproctis chionitis*, Turn., Trans. Roy. Soc. S. Aust., xxvi., 1902, p. 177.

N.Q.: Cairns Herberton, Cardwell; Q.: Eidsvold, Nambour, Brisbane, Stradbroke Island, Mt. Tambourine; Vic.: Healesville; S.A.: Adelaide; W.A.: Waroona.

16. ACYPHAS LEPTOTYPA.

*Euproctis leptotypa*, Turn., Trans. Ent. Soc., 1904, p. 475.

N.Q.: Townsville, from larvae feeding on *Acacia aulacocarpa* (Dodd), Cairns.

17. ACYPHAS LEUCOMELAS.

*Euproctis leucomelas* Wlk., List Lep. Brit. Mus., iv., p. 838; *Porthesia anacausta*, Meyr., Trans. Roy. Soc. S. Aust., xv., 1891, p. 193; *P. hololeuca*, *ibid.*

♂. 28-38 mm. ♀. 28-42 mm. Head, thorax, and abdomen white. Palpi ochreous in ♂, whitish in ♀. Antennae white, pectinations fuscous. Pectus ochre-



ous in ♂, faintly ochreous-tinged in ♀. Legs white; anterior pair with coxae and anterior surface of femora and tibia ochreous in ♂. Forewings triangular, costa gently arched, apex rounded, termen bowed, slightly oblique, more so in ♀; white; in ♂ sometimes a fuscous spot at tornus, or whole apical and terminal area suffused with dark-fuscous; cilia white, in dark examples of the ♂ they may be fuscous. Hindwings with termen rounded; white; in ♂ sometimes with a broad dark-fuscous suffusion over terminal half; cilia white, in dark examples of the ♂ they may be fuscous. Underside white; in ♂ a costal streak and apical blotch more or less fuscous, sometimes extensively suffused with dark-fuscous as on upper side.

The ♂ is very variable in the amount of fuscous suffusion, but some is always present on the underside of the forewing. This will distinguish it from the ♂ of *A. chionitis*, which has an ochreous costal streak from base on underside.

Vic.: Melbourne. Gishorne, Mt. St. Bernard (5000ft.); Tas.: Hobart. Swansea; S.A.: Penola.

#### 18. ACYPHAS AMPHIDETA.

*Euproctis amphideta*, Turn., Trans. Roy. Soc. S. Aust., xxvi., 1902, p. 177.

I have not seen a ♀.

N.Q.: Innisfail, Atherton, Townsville.

#### 19. ACYPHAS FULVICEPS.

*Charnidas fulviceps*, Wlk., List Lep. Brit. Mus., iv., p. 797; *Acyphas fusca* Wlk., List Lep. Brit. Mus., iv., p. 798.

♂. 36-40 mm. Head and thorax orange-ochreous. Palpi 1; orange-ochreous. Antennae fuscous, base of stalk whitish-ochreous; pectinations in ♂ 16. Abdomen fuscous. Legs fuscous; anterior pair, except tarsi, orange-ochreous. Forewings triangular, costa gently arched, apex rounded, termen bowed, oblique; fuscous; cilia fuscous. Hindwings with termen rounded; fuscous; cilia fuscous. Underside fuscous.

Described from a small series, including the types, in the British Museum.

Tas.: Hobart.

#### Gen. 5. HABROPHYLLA, n.gen.

ἄβροφυλλος, soft-winged.

Palpi short, porrect, densely hairy; terminal joint concealed. Thorax and abdomen without crests. Posterior tibiae with terminal spurs only. Forewings without areole, 7, 8, 9, 10 stalked, 7 arising before 10, 6 connate. Hindwings with discocellulars angled; 3 and 4 stalked, 5 approximated, 6 and 7 stalked, 8 anastomosing with cell from  $\frac{1}{2}$  to  $\frac{3}{4}$ .

A development of *Euproctis*, the venation of the forewings being that of *Euproctis* and *Porthesia*; the former has 3 and 4 of the hindwings sometimes stalked. In the long anastomosis of 8 with cell, it differs from both, and agrees with *Acyphas*; in the loss of the middle spurs it differs from all three.

#### 20. HABROPHYLLA EURYZONA.

*Euproctis euryzona*, Low., Trans. Roy. Soc. S. Aust. xxvi., 1902, p. 213.

#### Gen. 6. EUPROCTIS.

*Euproctis*, Hb., Verz., p. 159.

Palpi moderate or short, porrect or obliquely porrect; second joint sometimes hairy; terminal joint short or moderate. Thorax and abdomen without crests;

tuft large especially in ♀. Posterior tibiae with two pairs of spurs. Forewings without areole, 7, 8, 9, 10 stalked, 7 arising from 8 before 10, 6 connate or from slightly below angle. Hindwings with discocellulars angled, 3 and 4 approximated, connate, or stalked, 5 well separated at origin, 6 and 7 stalked, 8 approximated or connected with cell about middle.

A large genus. Type, *E. chrysorrhoea* Lin. from Europe.

- |                                                                             |     |                         |
|-----------------------------------------------------------------------------|-----|-------------------------|
| 1. Hindwings wholly or partly ochreous-tinged, ochreous or orange . . . . . | 2.  |                         |
| Hindwings fuscous . . . . .                                                 | 17. |                         |
| 2. Hindwings with fuscous terminal band . . . . .                           |     | <i>stenomorpha.</i>     |
| Hindwings without fuscous terminal band . . . . .                           | 3.  |                         |
| 3. Hindwings with orange terminal band . . . . .                            |     | <i>subnobilis.</i>      |
| Hindwings without orange terminal band . . . . .                            | 4.  |                         |
| 4. Forewings with darker transverse lines or fasciae . . . . .              | 5.  |                         |
| Forewings without lines or fasciae . . . . .                                | 8.  |                         |
| 5. Forewings with lines or fasciae fuscous . . . . .                        | 6.  |                         |
| Forewings with lines or fasciae reddish-brown . . . . .                     | 7.  |                         |
| 6. Wings whitish, slightly tinged with ochreous . . . . .                   |     | <i>idonea.</i>          |
| Wings pale-ochreous . . . . .                                               |     | <i>aganopa.</i>         |
| 7. Forewings with postmedian fascia . . . . .                               |     | <i>epaxia.</i>          |
| Forewings with antemedian fascia . . . . .                                  |     | <i>hymnalis.</i>        |
| 8. Wings unicolorous, without markings . . . . .                            | 9.  |                         |
| Wings not so . . . . .                                                      | 12. |                         |
| 9. Wings pale ochreous . . . . .                                            | 10. |                         |
| Wings deep ochreous . . . . .                                               | 11. |                         |
| 10. Forewings with costa and cilia darker . . . . .                         |     | <i>lucifuga.</i> ♀      |
| Forewings with costa and cilia not darker . . . . .                         |     | <i>epidela.</i> ♀       |
| 11. Wings and abdominal tuft ochreous . . . . .                             |     | <i>crocea.</i>          |
| Wings reddish-ochreous, abdominal tuft whitish . . . . .                    |     | <i>arrogans.</i>        |
| 12. Hindwings with base fuscous . . . . .                                   | 13. |                         |
| Hindwings with base not fuscous . . . . .                                   | 14. |                         |
| 13. Forewings whitish-grey . . . . .                                        |     | <i>habrostola.</i> ♀    |
| Forewings fuscous . . . . .                                                 |     | <i>actor.</i> ♀         |
| 14. Forewings unicolorous, whitish-grey . . . . .                           |     | <i>habrostola.</i> ♂    |
| Forewings not so . . . . .                                                  | 15. |                         |
| 15. Forewings with pale transverse lines . . . . .                          |     | <i>epidela.</i> ♂       |
| Forewings without transverse lines . . . . .                                | 16. |                         |
| 16. Forewings with pale ochreous terminal band . . . . .                    |     | <i>edwardsi</i> (part). |
| Forewings with ochreous spots only . . . . .                                |     | <i>actor.</i> ♂         |
| 17. Hindwings with termen not whitish . . . . .                             | 18. |                         |
| Hindwings with termen whitish . . . . .                                     | 20. |                         |
| 18. Fore- and hindwings nearly unicolorous . . . . .                        |     | <i>edwardsi</i> (part). |
| Fore- and hindwings differing in colour . . . . .                           | 19. |                         |
| 19. Forewings without transverse lines . . . . .                            |     | <i>pyraustis.</i>       |
| Forewings with paler transverse lines . . . . .                             |     | <i>lucifuga.</i> ♂      |
| 20. Forewings with complete, whitish, terminal fascia . . . . .             | 21. |                         |
| Forewings with whitish incomplete fascia or terminal spots . . . . .        | 22. |                         |
| 21. Forewings with anterior margin of fascia slightly wavy . . . . .        |     | <i>baliolalis.</i>      |
| Forewings with anterior margin of fascia dentate . . . . .                  |     | <i>marginalis.</i>      |
| 22. Forewings with terminal spots not extending to apex . . . . .           |     | <i>limbalis.</i>        |
| Forewings with terminal spots extending to apex . . . . .                   |     | <i>niphobola.</i>       |

21. *EUPROCTIS STENOMORPHA*, n.sp.

στενυμορφος, narrowly formed.

♂. 30 mm. Head orange. Palpi short ( $\frac{1}{2}$ ); fuscous. Antennae dark-fuscous. Thorax dark-fuscous; tegulae and a posterior spot orange. Abdomen dark-fuscous, tuft orange. Legs ochreous; tibiae and tarsi fuscous. Forewings elongate-triangular, rather narrow, costa straight, apex pointed, termen bowed, strongly oblique; dark-fuscous; an inwardly oblique, orange-ochreous, median fascia, dilated beneath, but not reaching costa; cilia fuscous. Hindwings with termen slightly rounded; 3 and 4 connate or stalked; ochreous; a fuscous terminal band narrowing to a point at tornus; cilia fuscous; on tornus and dorsum ochreous. Underside similar but paler; a central ochreous suffusion in forewings extending on dorsum to base.

The wings narrower than in other species of the genus, and with a different *facies*, but a true *Euproctis*.

N.A.: Port Darwin, in September; two specimens received from Mr. F. P. Dodd.

22. *EUPROCTIS IDONEA*.

*Euproctis idonea*, Swin., Trans. Ent. Soc., 1903, p. 401.

I have not seen this species.

N.W.A.: Sherlock River.

23. *EUPROCTIS AGANOPA*, n.sp.

ἀγανωπος, of gentle appearance.

♂. 30-32 mm. Head, antennae, thorax, abdomen, and legs pale-ochreous. Palpi moderate (1), obliquely porrect; pale-ochreous. Forewings oval-triangular, costa strongly arched, apex round-pointed, termen bowed, oblique; pale-ochreous with a few fuscous scales; a dark-fuscous discal dot beneath costa about middle; two, fine, fuscous, transverse lines; first obsolete towards costa, angled outwards in middle, ending on  $\frac{1}{3}$  dorsum; second from beneath  $\frac{3}{4}$  costa, sinuate, ending on  $\frac{2}{3}$  dorsum; in a second example the median area between lines is uniformly fuscous; cilia pale-ochreous. Hindwings with termen strongly rounded; 3 and 4 connate; pale-ochreous; cilia pale-ochreous. Underside wholly pale-ochreous.

N.Q.: Evelyn Scrub, near Herberton, in November; three specimens received from Mr. F. P. Dodd.

24. *EUPROCTIS PYRAUSTIS*.

*Euproctis pyraustis*, Meyr., Trans. Roy. Soc. S. Aust., xv., 1891, p. 194;

*Euproctis scotchlya*, Turn., Trans. Roy. Soc. S. Aust., xxvi., 1902, p. 178.

Hindwings of ♂ with 3 and 4 approximated. The ♀ is unknown.

N.A.: Adelaide River; N.Q.: Cairns, Townsville.

25. *EUPROCTIS LUCIFUGA*.

*Artaxa lucifuga*, Luc., Proc. Linn. Soc. N.S. Wales, 1892, p. 250; *Euproctis chrysoptera*, Turn., Proc. Linn. Soc. N.S. Wales, 1902, p. 178; *nee* Wlk.

Hindwings of ♂ with 3 and 4 approximated, of ♀ with 3 and 4 stalked. I have already described this species, of which the sexes are strikingly dissimilar.

N.Q.: Cairns, Townsville; Q.: Eidsvold, Gayndah, Caloundra, Brisbane.

## 26. EUPROCTIS EPIDELA.

*Euproctis epidela*, Turn., Trans. Roy. Soc. S. Aust., xxx., 1906, p. 125.

Hindwings with 3 and 4 stalked in both sexes.

N.A.: Port Darwin; N.Q.: Cairns.

## 27. EUPROCTIS EPANIA.

*Euproctis epania*, Turn., Trans. Roy. Soc. S. Aust., 1906, p. 125.

Hindwings with 3 and 4 approximated or stalked in ♂. I have not seen a ♀.

N.A.: Melville Island; N.Q.: Cairns, Herberton.

## 28. EUPROCTIS HYMNOLIS, n.sp.

ὕμνολις, worthy of praise.

♂. 40 mm. Head ochreous. Palpi slender, rather long (2 $\frac{1}{2}$ ); ochreous. Antennae ochreous. Thorax orange-ochreous. Abdomen ochreous, tuft grey. Legs ochreous. Forewings suboval, costa strongly arched, apex rounded, termen bowed, strongly oblique; orange-ochreous; a transverse fascia before middle defined by pale lines, angulated outwards above middle, above angle wider and orange-ochreous, beneath angle narrower, dark reddish-brown; posterior to fascia the veins are outlined in pale streaks; a postmedian band of slight reddish-brown irroration; cilia ochreous. Hindwings with termen rounded; 3, 4, 5, approximated at origin; pale-ochreous; cilia pale-ochreous. Underside pale-ochreous.

Type in Coll. Lyell.

N.Q.: Kuranda, near Cairns, in June; one specimen received from Mr. F. P. Dodd.

## 29. EUPROCTIS SUBNOBILIS.

*Portlesia subnobilis*, Snell., Tijds. v. Ent., xxiv., 1881, p. 128; *Artara simulans*, Butl., Ann. Mag. Nat. Hist., (5), xiii., 1884, p. 200; *Euproctis criegides*, Turn., Trans. Ent. Soc., 1904, p. 475.

Hindwings with 3 and 4 approximated.

N.Q.: Cairns, Innisfail. Also from Key I. and Amboyna.

## 30. EUPROCTIS CROCEA.

*Teara crocea*, Wlk., List Lep. Brit. Mus., xxxii., p. 355; *Euproctis holorutha*, Turn., Trans. Roy. Soc. S. Aust., xxvi., 1902, p. 178.

♂. 40-45 mm. ♀. 52 mm. Head, thorax, and antennae deep ochreous-yellow, sometimes orange. Palpi moderate (1), porrect; second joint not hairy; terminal joint moderate; ochreous. Abdomen ochreous or orange-ochreous, dorsum sometimes suffused with fuscous except towards base, tuft ochreous. Forewings triangular, costa slightly arched in ♂, more strongly in ♀; apex rounded, termen bowed, oblique; deep ochreous-yellow, sometimes ochreous-orange; sometimes with paler discal dot beneath mid-costa; cilia concolorous. Hindwings with termen rounded; 3 and 4 approximated, connate, or stalked; as forewings or slightly paler. Underside ochreous.

N.A.: Adelaide River; N.Q.: Innisfail, Townsville; Q.: Rockhampton, Brisbane, Mt. Tamborine. Also from New Guinea.

## 31. EUPROCTIS ARROGANS.

*Artara arrogans*, Luc., Proc. Roy. Soc. Q'land, 1899, p. 140; Turn., Trans. Roy. Soc. S. Aust., xxvi., 1902, p. 179; *A. meeki*, Druce, Ann. Mag. Nat. Hist. (7), xii., 1903, p. 222; *Euproctis arclada*, Swin., Trans. Ent. Soc., 1903, p. 409.

Reddish-ochreous; abdominal tuft whitish. Hindwings with 3 and 4 approximated. One ♀ has a minute areole in both forewings; this is a reversional abnormality.

N.Q.: Cooktown, Cairns, Innisfail, Cardwell, Ingham, Atherton. Also from New Guinea.

## 32. EUPROCTIS HABROSTOLA.

*Euproctis habrostola*, Turn., Trans. Roy. Soc. S. Aust., xxvi., 1902, p. 179; *Euproctis pura*, Swin., Trans., Ent. Soc., 1903, p. 405.

♂. 47 mm. Head, thorax, and antennae brown-whitish. Palpi short ( $\frac{1}{2}$ ), porrect; second point somewhat hairy beneath, terminal point minute; ochreous. Abdomen fuscous; base, tuft, and underside ochreous. Legs ochreous. Forewings triangular, costa moderately arched, apex rounded, termen bowed, oblique; brown-whitish; cilia brown-whitish. Hindwings with termen rounded; 3 and 4 approximated or connate; ochreous-yellow; cilia slightly paler. Underside ochreous.

♀. 60 mm. Palpi  $\frac{3}{4}$ . Hindwings with basal and dorsal area fuscous both above and beneath, its edges suffused.

N.Q.: Townsville; Q.: Rockhampton.

## 33. EUPROCTIS ACTOR, n.sp.

ἄκτωρ, a leader.

♂. 55 mm. Head reddish-brown; face ochreous-fuscous. Palpi short ( $\frac{2}{3}$ ), porrect; terminal joint minute; ochreous-fuscous. Antennae ochreous-fuscous. Thorax reddish-brown. Abdomen fuscous, sides brownish, tuft and under surface ochreous. Legs pale-ochreous. Forewings oval-triangular, costa strongly arched towards apex; apex rounded, termen bowed, oblique; rather pale fuscous; an outwardly-oblique, oval, pale-ochreous, discal spot beneath costa about middle; a series of longitudinal, oval, pale-ochreous, terminal spots of fairly large but unequal size, separated by fuscous or reddish-brown lines; cilia fuscous. Hindwings with termen strongly rounded; 3 and 4 approximated; ochreous, towards dorsum orange-ochreous; cilia ochreous. Underside wholly pale-ochreous.

♀. 70 mm. Head, thorax, and forewings wholly fuscous. Hindwings ochreous; basal third dark-fuscous. Underside similar.

N.Q.: Kuranda, near Cairns, in March (1♂, 1♀); N.S.W.: Lismore (1♀). It is quite possible that the pale spots on forewing of ♂ are variable and inconstant.

## 34. EUPROCTIS EDWARDSI.

*Teara edwardsi*, Newm., Trans. Ent. Soc., 1856, Pl. 18, f. 10; *Teara defecita*, Wlk., List Lep. Brit. Mus., xxxii., p. 352; *Teara indecora* Wlk., *op. cit.*, p. 353; *Teara togata*, Luc., Proc. Linn. Soc. N.S. Wales, 1891, p. 285.

♂. 40-50 mm. Head and thorax orange-ochreous, ochreous or greyish-ochreous. Palpi and antennae pale-ochreous or whitish. Abdomen dark-fuscous. Tuft and underside ochreous. Legs pale-ochreous or grey. Forewings oval-

triangular, costa straight towards base, strongly arched towards apex; apex rounded, termen obliquely rounded; pale-grey; sometimes with ochreous discal spot and terminal band, the latter with irregular anterior margin, sometimes prolonged along dorsum; cilia orange-ochreous, greyish-ochreous or grey, on dorsum long. Hindwings with termen strongly rounded; 3 and 4 approximated or connate; ochreous or ochreous-grey-whitish, often suffused with fuscous towards base and dorsum; cilia zoncolorous.

♀. 53-55 mm. Head, thorax, palpi, antennae, wings, abdomen, and tuft fuscous.

The ♂ varies much in colouration.

Q.: Gayudah, Brisbane; N.S.W.: Sydney; S.A.: Adelaide.

### 35. EUPROCTIS BALIOLALIS.

*Urocoma baliolalis*, Swin., Cat. Oxf. Mus., i., p. 215, Pl. vi., f. 7 (1892).

♂♀. 40-48 mm. Head thorax, and antennae pale brownish-fuscous. Palpi short ( $\frac{1}{2}$ ), porrect; second joint hairy; terminal joint minute; pale brownish-fuscous. Abdomen fuscous or dark-fuscous; tuft in ♂ brownish, in ♀ fuscous. Legs whitish-brown. Forewings rather narrow, elongate-oval, costa strongly arched, apex rounded, termen bowed, strongly oblique; pale-brownish-fuscous; a white terminal fascia suffused wholly, or only towards termen, with pale brownish-fuscous, anterior edge of fascia wavy; cilia whitish, tinged with pale brownish-fuscous. Hindwings with termen gently rounded; 3 and 4 connate in ♂, separate in ♀; fuscous; a terminal fascia and sometimes also costal area whitish; cilia whitish. Underside pale-fuscous with terminal white fascia on both wings, but sometimes forewings and costal area of hindwings are whitish.

N. Q.: Atherton; Q.: Brisbane, Toowoomba; Vic.: Kewell (Jas. Hill).

### 36. EUPROCTIS MARGINALIS.

*Trichetra marginalis*, Wlk., List Lep. Brit. Mus., iv., p. 845.

♂♀. 44-49 mm. Head fuscous or dark-fuscous, sometimes ochreous-tinged. Palpi short ( $\frac{1}{2}$ ); fuscous. Antennae grey; pectinations ochreous-tinged. Thorax fuscous or dark-fuscous, sometimes ochreous-tinged. Abdomen dark-fuscous; tuft pale-ochreous. Legs fuscous. Forewings elongate-oval, costa rather strongly arched, apex rounded, termen slightly bowed, strongly oblique; fuscous with a few whitish scales; a continuous terminal whitish fascia from costa to tornus, its anterior edge sharply and irregularly dentate, its terminal edge more or less broadly suffused with pale-fuscous; cilia pale-fuscous. Hindwings with termen only slightly rounded; 3 and 4 connate or separate; fuscous; a broad white terminal band, sometimes prolonged along costa, narrowing to a point at tornus; cilia whitish or pale-fuscous, on tornus and dorsum fuscous.

Vic.: Gisborne; Tas.: ———; S.A.: Port Lincoln.

### 37. EUPROCTIS LIMBALIS.

*Urocoma limbalis*, H.Sch., Ausser. Schmet., i., f. 389.

♂♀.—42-54 mm. Head dark-fuscous; face ochreous-fuscous. Palpi 1: fuscous. Antennae whitish, towards base fuscous, in ♀ fuscous; pectinations ochreous-tinged. Thorax dark-fuscous. Abdomen dark-fuscous; tuft pale-



ochreous. Legs fuscous. Forewings elongate-oval, costa rather strongly arched, apex rounded, termen nearly straight, strongly oblique; dark-fuscous; a white terminal fascia, commencing in a point beneath apex and gradually increasing in breadth to tornus, its anterior edge wavy, its terminal edge broadly suffused with pale-fuscous; cilia pale-fuscous. Hindwings with termen only slightly rounded; 3 and 4 separate; fuscous, a broad, white, terminal band, sometimes produced along costa, narrowing to a point at tornus, in ♀ less pronounced or nearly obsolete; cilia white, on tornus and dorsum fuscous, in ♀ sometimes wholly fuscous. Underside similar.

Q.: Toowoomba; N.S.W.: Sydney; Vic.: Melbourne.

### 38. EUPROCTIS NIPHOBOLA.

*Euproctis niphobola* Turn., Trans. Roy. Soc. S. Aust., xxvi., 1902, p. 179.

The ♀ expands up to 51 mm. Hindwings with 3 and 4 approximated or stalked. The white terminal fascia of hindwings is not only interrupted in ♀ by the veins, but in both sexes is narrower than in *marginalis* and *limbalis*.

N.Q.: Townsville; Q.: Brisbane, Toowoomba, Chinchilla.

In the South Australian Museum is a small ♂ (32 mm.) labelled "S. Australia Guest Coll." with the whitish terminal spots obsolete. I think it is an aberration of this species.

### Gen. 7. HERACULA.

*Heracula*, Moore, Proc. Zool. Soc., 1865, p. 804; Hmps., Moths Ind., i., p. 458.

Characters of *Euproctis* but palpi long, erect, reaching vertex. Type, *H. disciritta* Moore, from India.

### 39. HERACULA LEONINA.

*Heracula leonina*, Turn., Trans. Roy. Soc. S. Aust., xxvii., 1903, p. 17.

N.Q.: ———. The type of this species formerly in the Queensland Museum has disappeared. There is a specimen in the British Museum from New Guinea.

### Gen. 8. DURA.

*Dura*, Moore, Lep. Atk., 1879, p. 56; Hmps., Moths Ind., i., p. 467.

Palpi moderate, ascending, sometimes reaching vertex; second joint long, densely rough-haired anteriorly; terminal joint very short. Thorax and abdomen without crests. Posterior tibiae with two pairs of spurs. Forewings without arcade, 6 from below upper angle or short-stalked, 7, 8, 9, 10 stalked, 7 arising before 10, 11 anastomosing, connected, or at least closely approximated to 12. Hindwings with 6 and 7 separate, connate or stalked, 8 connected with cell slightly before middle.

This natural genus must be separated from *Imaus* Moore, which has 11 well separated from 12. *Dasychiroides* B.-Bak, differs only in the rounded hindwing, and is not I think tenable as a distinct genus. Type, *D. alba* Moore, from India. The genus is Papuan, extending into India and Australia.

- |                                         |    |                          |
|-----------------------------------------|----|--------------------------|
| 1. Termen of hindwings angled . . . . . | 2. |                          |
| Termen of hindwings rounded . . . . .   | 3. |                          |
| 2. Forewings white . . . . .            |    | <i>marginepunctata</i> . |
| Forewings ochreous-grey . . . . .       |    | <i>ochrias</i> .         |
| 3. Hindwings fuscous . . . . .          |    | <i>pratti</i> .          |
| Hindwings whitish . . . . .             |    | <i>prionodesma</i> .     |

## 40. DURA MARGINEPUNCTATA.

*Imaus marginepunctata*, B.-Bak., Nov. Zool., 1904, p. 410.

♂. 35-37 mm. Head and thorax whitish. Antennae whitish, pectinations ochreous-brown. Palpi moderately long ( $1\frac{1}{4}$ ), porrect, with dense long hairs on inferior surface; terminal joint moderate; whitish, external surface fuscous. Abdomen whitish. Legs whitish. Forewings triangular, costa rather strongly arched, apex round-pointed, termen slightly bowed, slightly oblique; whitish; four, slender, dentate, fuscous, transverse lines; first from costa near base, not reaching dorsum; second from  $\frac{1}{4}$  costa to  $\frac{2}{3}$  dorsum; third from  $\frac{2}{3}$  costa, curved inwards in disc and then downwards to  $\frac{2}{3}$  dorsum; fourth subterminal; costal edge fuscous towards base; a faintly marked, orbicular, fuscous ring in disc before middle; sometimes a dark-fuscous dot before middle of third line; dark-fuscous costal dots at commencement of lines; a terminal series of blackish dots between veins; cilia whitish. Hindwings suboblong, with a prominent rounded angle on vein 3; whitish; sometimes with slight grey terminal suffusion, and one or two, fuscous, terminal dots near angle; cilia whitish. Underside whitish.

N.Q.: Kuranda, near Cairns, in November, December, and February; Atherton; four specimens. Also from New Guinea.

## 41. DURA OCHRIS.

*Imaus ochrias*, Turn., Trans. Roy. Soc. S. Aust., xxx., 1906, p. 126.

N.Q.: Thursday Island, one ♀ in Coll. Lyell, similar to ♂ but much larger (42 mm.); Cairns.

## 42. DURA PRATTI.

*Dasychiroides pratti* B.-Bak., Nov. Zool., 1904, p. 406, Pl. vi., f. 7.

♂. 44-46 mm. Head and thorax whitish. Antennae whitish, pectinations ochreous-brown. Palpi moderately long ( $1\frac{1}{4}$ ), obliquely porrect, rough-haired beneath; terminal joint moderate; whitish, external surface, except terminal joint, dark-fuscous. Abdomen grey with some whitish admixture, tuft whitish. Legs grey-whitish. Forewings elongate-triangular, costa strongly arched, apex rounded-rectangular, termen not oblique, rounded beneath; whitish, median area sometimes suffused with grey; four slender, dentate, fuscous, transverse lines; first near base; second from  $\frac{1}{4}$  costa to mid-dorsum; third very acutely dentate, from  $\frac{2}{3}$  costa to  $\frac{2}{3}$  dorsum, curved outwards beneath costa, then strongly inwards, then downwards; fourth subterminal, with traces of a fifth line beyond and parallel; a terminal series of fuscous dots between veins; cilia whitish. Hindwings with termen rounded; fuscous; cilia whitish. Underside fuscous, dorsal and terminal areas of forewings whitish.

Probably *D. bicolora* B.-Bak. and *D. brunneostrigata* B.-Bak. are conspecific.

N.Q.: Kuranda, near Cairns, in October and December; three specimens received from Mr. F. P. Dodd. Also from New Guinea.

## 43. DURA PRIONODESMA, n. sp.

πριονοδεσμος, with saw-like band.

♂. 46 mm. Head ochreous-whitish. Palpi  $1\frac{1}{2}$ ; whitish; outer surface of second joint partly dark-fuscous. Antennae whitish, pectinations pale-grey. Thorax grey-whitish, tegulae ochreous-whitish. Abdomen whitish-ochreous. Legs whitish-ochreous. Forewings triangular, costa straight to beyond middle, thence arched, apex round-pointed, termen slightly bowed, oblique; 6 short-stalked, 7

arising before 10, 11 anastomosing at a point with 12; grey-whitish; markings fuscous; a dot on costa near base; an interrupted slightly wavy line from  $\frac{1}{4}$  costa to  $\frac{2}{5}$  dorsum; a sharply dentate sinuous line from  $\frac{3}{4}$  costa to  $\frac{1}{4}$  dorsum; some minute subterminal and terminal dots; cilia grey-whitish. Hindwings with termen rounded; whitish, towards base faintly ochreous-tinged; cilia whitish. Underside whitish.

Type in Coll. Lyell.

N.A.: Port Darwin in November; one specimen received from Mr. F. P. Dodd.

#### Gen. 9. ENOME.

*Enome*, Wlk., List Lep. Brit. Mus., iv., p. 883.

Palpi moderate, porrect; second joint hairy; terminal joint short. Thorax and abdomen without crests, tuft moderate. Posterior tibiae without middle spurs. Forewings without areole, 7, 8, 9, 10 stalked, 10 arising before 7, 6 approximated or stalked. Hindwings with discocellulars angled, 3, 4, 5 separate, 6 and 7 connate or stalked, 8 approximated and connected with cell at about  $\frac{1}{3}$ . ♀ with wings much aborted.

Type, *E. ampla* Wlk., from India.

- |                                                                               |                    |
|-------------------------------------------------------------------------------|--------------------|
| 1. Hindwings white, forewings without discal dot . . . . .                    | <i>pelospila</i> . |
| Hindwings tinged with fuscous or rosy, forewings<br>with discal dot . . . . . | <i>antennata</i> . |

#### 44. ENOME PELOSPILA.

*Lymantria pelospila*, Turn., Proc. Roy. Soc. Q'land, xxvii., 1915, p. 24.

N.A.: Pt. Darwin.

#### 45. ENOME ANTENNATA.

*Lymantria antennata*, Wlk., List Lep. Brit. Mus., iv., 881; *Lymantria aurora*, Turn., Trans. Roy. Soc. S. Aust., xxvi., 1902, p. 181 (praeoce.); *Lymantria turneri*, Swin., Trans. Ent. Soc., 1903, p. 484.

The rosy suffusion of the hindwings is very variable in degree and may be wholly absent and replaced by fuscous.

N.Q.: Cape York, Cairns, Stannary Hills, Townsville; Q.: Brisbane; N.S.W.: Richmond River.

#### Gen. 10. LYMANTRIA.

*Lymantria*, Hb., Verz., p. 160.

Palpi moderate or short, porrect; second joint more or less hairy beneath; terminal joint moderate or short. Thorax and abdomen without crests. Posterior tibiae with two pairs of spurs. Forewings without areole, 7, 8, 9, 10 stalked, 10 arising before, or opposite 7. Hindwings with 3 and 4 approximated at origin, 6 and 7 connate or stalked, 8 approximated and connected with cell at, or shortly before middle. ♀ with wings fully developed.

Type, *L. monacha* Lin., from Europe.

- |                                                                         |                       |
|-------------------------------------------------------------------------|-----------------------|
| 1. Forewings with numerous interrupted, dark transverse lines . . . . . | <i>nephrographa</i> . |
| Forewings with only two transverse lines . . . . .                      | 2.                    |
| 2. Forewings with discal spots whitish . . . . .                        | <i>binotata</i> .     |
| Forewings with discal spots dark-fuscous and ochreous . . . . .         | <i>reducta</i> .      |

## 46. LYMANTRIA NEPHROGRAPHA.

*Lymantria nephrographa*, Turn., Proc. Roy. Soc. Q'land, xxvii., 1915, p. 23.

Forewings with 10 arising opposite 7. Hindwings with 6 and 7 separate or stalked.

In the type vein 10 arises on one side after 7, but the venation of this wing is abnormal, vein 7 being connected beyond its middle by a crossbar with 8.

Q.: Mt. Tambourine, Killarney; N.S.W.: Dorrigo (South Australian Museum. A ♀ example, wings fully developed, expanding 82 mm., forewings with 10 arising on one side shortly beyond 7, on the other side absent. It seems that this species is subject to venational abnormalities.)

## 47. LYMANTRIA REDUCTA.

*Darula reducta*, Wlk., List Lep. Brit. Mus., iv., p. 888.

♂. 40-45 mm. ♀. 56-60 mm. Head and thorax fuscous. Antennae fuscous, pectinations ochreous-tinged. Palpi in ♂ 1, in ♀  $1\frac{1}{2}$ , porrect; second joint hairy beneath; terminal joint moderately long; fuscous, darker in ♂. Abdomen and legs fuscous. Forewings elongate-triangular, costa strongly arched, apex rounded, termen obliquely rounded; 10 arising before 7; pale fuscous-grey; a suffused fuscous spot on base of costa; a wavy fuscous line from  $\frac{1}{3}$  costa to about mid-dorsum; a circular, ochreous, orbicular spot outlined and centred with dark-fuscous; an irregular reniform, fairly large, dark-fuscous spot, edged anteriorly and posteriorly with ochreous, and this again with fuscous; a slender, slightly dentate, slightly sinuate, fuscous line from  $\frac{2}{4}$  costa to  $\frac{2}{4}$  dorsum; some obscure, darker, terminal dots; cilia pale fuscous-grey. Hindwings with termen only slightly rounded; 6 and 7 stalked; whitish with pale-fuscous terminal suffusion; in ♀ wholly pale-fuscous; a suffused fuscous spot at end of cell; cilia pale-fuscous. Underside grey-whitish with two fuscous discal spots in forewings, one in hindwings.

N.Q.: Cairns, Atherton; Q.: Gympie, Nambour, Brisbane, Dalby, Cunnamulla; N.S.W.: Lismore.

## 48. LYMANTRIA BINOTATA.

*Leptocneria binotata*, Butl., Trans. Ent. Soc., 1886, p. 386, Pl. 9, t. 3.

♂. 34-38 mm. ♀. 42-54 mm. Head whitish or whitish-ochreous. Palpi in ♂ 2, in ♀  $2\frac{1}{2}$ ; whitish, outer surface of second joint sometimes fuscous. Antennae whitish-ochreous; pectinations in ♂ 16, in ♀ 5. Thorax whitish, grey-whitish, or whitish-ochreous. Abdomen ochreous-grey-whitish. Legs whitish or ochreous-whitish. Forewings elongate-triangular, in ♀ suboval, costa gently arched, apex rounded, termen slightly bowed, oblique; grey-whitish or whitish-ochreous; markings fuscous or grey; white-centred discal spots at  $\frac{1}{3}$  and middle, the former sometimes reduced to a dark-fuscous dot; a fuscous transverse line at  $\frac{1}{4}$ ; a second line from  $\frac{2}{3}$  costa to  $\frac{1}{2}$  dorsum, outwardly curved beneath costa, then parallel to termen, and sometimes denticulate, sometimes obsolete; denticulate subterminal and submarginal lines more or less distinct; cilia concolorous. Hindwings with termen slightly rounded; whitish, grey-whitish, or ochreous-whitish; cilia concolorous.

In the Port Darwin form the ♂ is slightly ochreous-tinged with fuscous markings in forewing, the ♀ grey-whitish with grey markings. Butler's ♂ type from Peak Downs approximates more to the ♀ form.

N.A.: Port Darwin; Q.: Peak Downs.

## Gen. 11. EUZORA.

*Euzora*, Turn., Proc. Roy. Soc. Q'land, xxvii., 1915, p. 22; *Caragola*, Moore, Lep. Auk., p. 46; Hmps., Moths Ind., i., p. 489 (*praeocc.*).

Palpi very short, porrect; second joint hairy beneath; terminal joint minute. Thorax and abdomen not crested, tuft small. Posterior tibiae without middle spurs. Forewings without areole, 7, 8, 9 stalked, 9 separating near apex, 10 from cell. Hindwings with 3, 4, 5 well separated at origin, 6 and 7 connate or short-stalked, 8 approximated to cell at  $\frac{1}{3}$  or before middle.

## 49. EUZORA COLLUCENS.

*Porthesia collucens*, Luc., Proc. Linn. Soc. N.S. Wales, 1889, p. 1090.

♂. 29 mm. ♀. 35 mm. Head, thorax, and abdomen white. Palpi  $\frac{1}{2}$ ; whitish-ochreous. Antennae white; pectinations, whitish-ochreous. Legs white; anterior femora in ♂ pale-ochreous. Forewings triangular, costa gently arched, apex round-pointed, termen slightly bowed, oblique; lustrous white; there are no true markings, but owing to irregularity of surface, there appear to be two, oblique, postmedian bands; cilia white. Hindwings with termen slightly rounded; white; cilia white. Underside white.

This may be the same as *clara* Wlk. from India.

N.Q.: Atherton; Q.: Brisbane.

## Gen. 12. REDOA.

*Redoa*, Wlk., List Lep. Brit. Mus., iv., p. 826.

Palpi moderate, obliquely porrect, thickened with appressed hairs; terminal joint concealed. Thorax and abdomen not crested. Posterior tibiae with two pairs of spurs. Forewings with areole long and narrow, 7 from about middle of areole, 8 and 9 connate or stalked from end of areole, 10 connate with them from end of areole. Hindwings with cell long ( $\frac{2}{3}$ ), discocellulars angled, 3 and 4 widely separated at origin, 5 separate, 6 and 7 connate or stalked, 8 approximated and connected with cell at  $\frac{1}{3}$ .

## 50. REDOA SUBMARGINATA.

*Redoa submarginata*, Wlk., List Lep. Brit. Mus., iv., p. 826; *Redoa transiens*, Wlk., Linn. Soc. Lond., Zool. vi., p. 128; *Leucoma hipparia*, Swin., Ann. Mag. Nat. Hist., (6), xii., p. 214 (1893).

♂. 37-38 mm. ♀. 41-42 mm. Head white, face orange-ochreous. Palpi 1; orange-ochreous, inner surface and base white. Antennae white, pectinations ochreous-tinged. Thorax and abdomen white. Legs white; apices of tarsi ochreous; anterior and middle pairs with a dark-fuscous spot on tibia near base, and another on base of tarsus. Forewings triangular, costa straight, slightly arched towards apex, apex pointed, termen nearly straight, slightly oblique; lustrous white with a strigulated appearance produced by small inequalities of surface; sometimes a minute blackish dot at end of cell; cilia white. Hindwings with termen nearly straight; white; cilia white. Underside white.

N.Q.: Cairns, Townsville. Also from the Archipelago, China, Ceylon, and India.



Gen. 13. ORGYIA.

*Orgyia*, Ochs., Schmet. Eur., iii., p. 208.

Palpi moderate, porrect, hairy beneath; terminal joint minute. Thorax with a posterior crest. Abdomen with a large dorsal crest on second and sometimes a small crest on third segment. Posterior tibiae without middle spurs. Anterior tarsi with dense tufts of hairs. Forewings with areole present, 7, 8, 9 stalked from areole, 10 separate. Hindwings with 3 and 4 connate, 5 well separate at origin, 6 and 7 stalked, 8 anastomosing with eell at about  $\frac{1}{3}$ . ♀ with wings minute or absent; antennae short, serrate.

Type, *O. antiqua* Lin., from Europe. Sir Geo. Hampson has recently substituted the name of *Notolophus* Germar, which is unfortunate, and used the name *Orgyia* for the genus hitherto known as *Dasychira*, which seems mischievous. When a name has been almost universally employed in one sense for about a century, to employ it in a different sense, even if it were not so changed by the adoption of an artificial mode of "fixing the type," is to reduce nomenclature into confusion. No one can tell, unless he knows the particular predilection of the author, what the name used by him really means.

- |                                                   |                     |
|---------------------------------------------------|---------------------|
| 1. Hindwings yellow with blackish terminal band   | <i>anartoides</i>   |
| Hindwings not yellow and without terminal band    | 2                   |
| 2. Forewings with whitish apical blotch . . . . . | <i>athlophora</i> . |
| Forewings without whitish blotch . . . . .        | <i>australis</i> .  |

51 ORGYIA ANARTOIDES.

*Teia anartoides*, Wlk., List Lep. Brit. Mus., iv., p. 804; *Teia pusilla*, Butl., Ann Mag. Nat. Hist., (5), ix., 1882, p. 88.

♂. 22-26 mm. Head ochreous. Palpi 1; ochreous. Antennae fuscous. Thorax fuscous mixed with ochreous, especially anteriorly. Abdomen dark-fuscous. Legs ochreous; anterior and middle tibiae and tarsi annulated with dark-fuscous. Forewings elongate-triangular, costa straight to  $\frac{2}{3}$ , thence strongly arched, apex rounded, termen nearly straight, oblique; ochreous-brown; a straight, blackish, sub-basal, transverse line; a circular darker brown spot, slenderly outlined with pale scales just beyond this above dorsum; a fuscous-brown line from  $\frac{1}{3}$  costa to near mid-dorsum, anteriorly suffused, posteriorly acutely angled outwards above middle, and from this to dorsum dentate; a few, scattered, whitish scales in mid-dise, and a slender, oval, whitish ring beyond middle representing reniform; a blackish dentate line from  $\frac{2}{3}$  costa, bent first outwards, and then strongly inwards, finally downwards to  $\frac{1}{2}$  dorsum, followed by a brown suffusion; traces of a slender, whitish, subterminal line; cilia ochreous-brown with bars of darker brown. Hindwings with termen nearly straight; ochreous-yellow; a broad, blackish, terminal fascia; cilia ochreous. Underside of forewings ochreous; costa broadly suffused with fuscous; a short, broad, blackish, central streak from base; a blackish postmedian fascia not reaching dorsum; of hindwings as upperside.

♀. Apterous; clothed with dense hairs, dark-grey; antennae short, serrate.

Q.: Blackbutt (Tillyard); N.S.W.: Sydney; Vic.: Melbourne; Tas.: ———.

52. ORGYIA ATHLOPHORA, n.sp.

ἀθλοφορος, bearing the prize.

♂. 34-38 mm. Head and thorax pale ochreous-grey. Palpi 1 $\frac{1}{2}$ ; ochreous, upper edge fuscous. Antennae pale fuscous. Abdomen whitish-ochreous, dorsal crests fuscous.



ous. Legs whitish-ochreous annulated with fuscous. Forewings triangular, costa straight to  $\frac{2}{3}$ , thence strongly arched, apex rounded, termen very slightly bowed, slightly oblique; pale ochreous-brown; a blackish, obliquely transverse, sub-basal line; a dentate, fuscous, transverse line from  $\frac{1}{3}$  costa to  $\frac{2}{3}$  dorsum, preceded by a fine whitish line, and edged posteriorly by a narrow whitish suffusion; reniform slenderly outlined in whitish, not always distinct; a blackish, finely dentate line from  $\frac{2}{3}$  costa, bent inwards below middle, and then downwards to  $\frac{2}{3}$  dorsum; a whitish subapical blotch, from which proceeds a slender, interrupted whitish line to a whitish spot above tornus; an indistinct submarginal line, partly whitish, partly fuscous; cilia pale ochreous-brown. Hindwings with termen rounded; ochreous-whitish slightly suffused with fuscous towards termen; cilia concolorous. Underside of forewings pale ochreous-grey, costal area to  $\frac{2}{3}$ , and a transverse line at  $\frac{2}{3}$  suffusedly fuscous; hindwings whitish-ochreous, a fuscous line from  $\frac{2}{3}$  costa towards but not reaching tornus.

♀. Apterous; clothed with dense hairs; antennae short, serrate.

W.A.: Perth; 3 ♂ and 2 ♀ specimens received from Mr. L. J. Newman.

### 53. ORGYIA AUSTRALIS.

*Orgyia australis*, Wlk., List Lep. Brit. Mus., iv., p. 787; *Lacida postica*, Wlk., *op. cit.*, iv., p. 803; *Orgyia canifascia*, Wlk., *op. cit.*, xxxii., p. 325; *Orgyia ceylanica*, Nietner, Edinb. New Phil. Journ., xv., 1864, p. 34; *Orgyia ludekingii*, Snel., Tijd. v. Ent., 1879, p. 104, Pl. 8, f. 5.

♂. 29-33 mm. Head, thorax, and antennae fuscous. Palpi  $1\frac{2}{3}$ ; ochreous-whitish with some fuscous suffusion. Abdomen fuscous, dorsal crests somewhat darker. Legs ochreous-whitish; anterior and middle pairs annulated with fuscous. Forewings triangular, costa moderately arched, more strongly towards apex, apex round-pointed, termen straight, oblique; pale-brown; sometimes indications of a sub-basal, transverse, fuscous line; a dentate, fuscous, transverse line from  $\frac{1}{3}$  costa to  $\frac{2}{3}$  dorsum; a second line from  $\frac{2}{3}$  costa, at first outwards, then bent strongly inwards, and again downwards to  $\frac{2}{3}$  dorsum; the included median area is suffused with whitish, and contains a brownish reniform spot, partly outlined with fuscous; an obscure, whitish, subterminal line preceded by two or three short, longitudinal, fuscous streaks in costal area and followed by some fuscous suffusion; a slender interrupted, submarginal, fuscous line; cilia brown. Hindwings with termen gently rounded; fuscous; cilia fuscous. Underside fuscous.

♀. Apterous; covered with dense grey hairs; antennae short, serrate.

This description refers to Brisbane example. Males from Port Darwin and Cairns are rather smaller (22-28 mm.), the markings less distinct, and the median band infuscated, obscuring or covering the whitish area.

N.A.: Port Darwin; N.Q.: Cairns, Townsville; Q.: Brisbane; N.S.W.: Sydney. Also from the Archipelago, Formosa, Ceylon, and India.

### Gen. 14. ТРОПОСА.

*Tropoca*, Turn., Trans. Ent. Soc., 1904, p. 477.

Palpi moderately long, porrect, with dense long hairs beneath; terminal joint short. Thorax with a posterior crest. Abdomen without crests but densely covered with long hairs. Posterior tibiae with two pairs of spurs. Forewings with areole usually present, 7, 8, 9 stalked from areole, connecting bar between 10 and

their common stalk sometimes imperfectly or not developed. Hindwings with 3 and 4 approximated or connate, 6 and 7 connate, 8 connected with cell at or shortly before middle. ♀ with wings absent; antennae very short, serrate; posterior tibiae without middle spurs.

The following species, the only one at present referred to the genus, shows considerable variability in the venation. When the areole is absent, the position of the lost connecting bar is shown by a slight deviation and thickening of the two adjacent veins. I have one very abnormal specimen in which (1) in the right forewing the areole is absent, but indicated as just stated, (2) in the left forewing the areole is more elongate than usual and 7 is connate from its narrow extremity, (3) in the left hindwing 3, 4, 5 are stalked, in the right hindwing 3 and 4 are coincident, 3 and 5 stalked; but both hindwings are smaller than usual, and the right has a pathological notch near tornus. The ♀ is much degraded, and densely covered throughout with long hairs.

#### 54. *TROPOCA ROTUNDATA.*

*Teara rotundata*, Wlk., List Lep. Brit. Mus., iv., p. 851.

♂. 45-50 mm. Head grey-whitish. Palpi 1½; dark-fuscous. Antennae whitish irrorated with fuscous, pectinations brownish. Thorax grey-whitish, crest fuscous with some brownish hairs. Abdomen ochreous-brown, base of dorsum fuscous, underside grey-whitish. Legs grey-whitish; anterior and middle tibiae annulated with dark-fuscous. Forewings triangular, costa straight to near apex, then strongly arched, apex rounded, termen obliquely rounded; grey-whitish; markings dark-fuscous; a basal patch extending to  $\frac{1}{3}$ , its posterior edge dentate on margins and middle, its centre irregularly suffused with grey-whitish; a denticulate transverse line from  $\frac{2}{3}$  costa, curved first outwardly, then inwardly, ending on dorsum before tornus; a dentate and blotched line near and parallel to this, thickened to a blotch beneath costa, again in middle, and thickened towards dorsum; cilia grey-whitish. Hindwings with termen rounded; fuscous with whitish suffusion; cilia whitish. Underside grey whitish.

♀. Wholly apterous. Head, thorax, and abdomen covered with dense, long, grey-whitish hairs. Antennae very short, slightly dentate. Legs whitish-ochreous, posterior tibiae without middle spurs.

Q.: Brisbane, Toowoomba. Both sexes from pupae found under bark of *Eucalyptus*; N.S.W.: Jervis Bay, near Nowra; a series of six ♂ and one ♀ bred from the larvae by Mr. Moss-Robinson; Vic.: Beechworth, Gisborne.

#### Gen. 15. ANIOLOGA.

*Ariologa*, Turn., Trans. Ent. Soc., 1904, p. 477.

Palpi moderate, hairy, porrect. Antennae well pectinated in ♀. Thorax and abdomen not crested; base of abdomen densely hairy above. Posterior tibiae with two pairs of spurs. Forewings with 10 connected with 8, 9 opposite 7 to form an areole, 11 anastomosing shortly with 12. Hindwings with 5 approximated at base with 4, 6 and 7 short-stalked, 8 anastomosing with cell before middle.

As I have no material for examination, I have transcribed my former diagnosis. Type, *A. pura* Luc.

#### 55. ANIOLOGA PURA.

*Teara pura*, Luc., Proc. Roy. Soc. Q'land, 1891, p. 75.

## Gen. 16. OLENE.

*Olene*, Hb., Zutr., ii., p. 19; Hmps., Moths Ind., i., p. 452.

Palpi rather long, obliquely porrect; second joint greatly thickened by dense long hairs anteriorly; terminal joint minute, concealed. Thorax with a small posterior erect. Abdomen with a large dorsal crest on second segment. Posterior tibiae with two pairs of spurs. Anterior tibiae densely hairy, tarsi also hairy. Forewings with areole present, 8 and 9 stalked from areole, 7 connate or closely approximate, 10 well separate. Hindwings with 3 and 4 approximated at origin, 5 from shortly above angle of cell, 6 and 7 stalked, 8 approximated and connected with cell at  $\frac{1}{3}$  or before middle.

Nearly allied to *Dasychira*, from which it differs in the pronounced abdominal crest and strongly dilated palpi. Type, *O. mendosa* Hb.

## 56. OLENE MENDOSA.

*Olene mendosa*, Hb., Zutr., ii., p. 19, f. 293, 294; *Antipha basalis*, Wlk., List Lep. Brit. Mus., iv., p. 806; *Nioda fusiformis*, Wlk., *op. cit.*, v., p. 1070; *Rilia lanceolata*, Wlk., *op. cit.*, v., p. 1075; *Dasychira basalis*, Wlk., *op. cit.*, xxxii., p. 362; *Dasychira divisa*, Wlk., *op. cit.*, xxxii., p. 363; *Dasychira distinguenda*, Wlk., *op. cit.*, xxxii., p. 435; *Olene basivitta*, Wlk., *op. cit.*, xxxii., p. 436; *Dasychira savanta*, Moore, Lep. E.I. Co., p. 340; *Turriga invasa*, Wlk., Char. Undese. Lep., p. 15.

♂. 28-44 mm. Head, thorax, palpi, and abdomen brownish-grey. Abdomen grey-whitish, crest fuscous-brown. Legs grey-whitish mixed, especially tarsi, with brown and fuscous. Forewings triangular, costa rather strongly arched, apex rounded, termen very slightly bowed, slightly oblique; brownish-grey; markings fuscous; a sub-basal transverse line; a slightly dentate line from  $\frac{1}{3}$  costa to  $\frac{2}{3}$  dorsum; reniform partly outlined with fuscous or whitish; a dentate line from  $\frac{2}{3}$  costa, at first outwardly curved, then bent inwards to beneath reniform, and again bent to end on  $\frac{1}{3}$  dorsum; an interrupted submarginal line; sometimes a large dark-fuscous spot just posterior to sub-basal line; sometimes a whitish spot in the same situation; sometimes whole of costal half of wing suffused with whitish; cilia brownish-grey, sometimes with fuscous bars. Hindwings with termen rounded; ochreous-grey-whitish; cilia eoneolorous.

♀. 50-60 mm. Forewings elongate-triangular, costa strongly arched, apex rounded, termen sinuate, strongly oblique; brownish, median area partly suffused with whitish; sub-basal line obsolete; a suffused fuscous streak on fold from base; a short, fuscous, subcostal streak from about  $\frac{2}{3}$ , not reaching termen; sometimes a small apical whitish suffusion.

The sexes differ and the ♂ is variable, but the species is always easily recognisable. I have also several dwarfed ♀. 34-40 mm., pale-ochreous, with markings nearly obsolete.

N.A.: Pt. Darwin; N.Q.: Cooktown, Cairns, Ingham, Townsville; Q.: Rockhampton, Duaringa, Brisbane. Also from Java, Ceylon, and India.

## Gen. 17. DASYPHORA.

*Dasyphora*, Stph., Ill. Brit. Ent. Haust., ii., p. 58.

Palpi rather long, porrect, hairy beneath; terminal joint short or concealed. Thorax with a small posterior erect. Abdomen with dense long hairs at base of dorsum but no true crest. Posterior tibiae with two pairs of spurs. Anterior

tibiae and tarsi densely hairy. Forewings with areole present, 8 and 9 stalked from areole, 7 connate or closely approximated at origin, 10 well separate. Hindwings with 3 and 4 approximated or connate, 5 from shortly above lower angle of cell, 6 and 7 stalked, 8 approximated and connected with cell at  $\frac{1}{3}$  or shortly before middle.

Type, *D. pudibunda* Lin. from Europe. A large genus, well represented in Indo-Malaya and Africa; but in Australia by only three species, two of which have a wide range outside the Australian region.

- |                                                                     |                     |
|---------------------------------------------------------------------|---------------------|
| 1. Hindwings with dorsal area deep-ochreous . . . . .               | <i>horsfieldi</i> . |
| Hindwings uniformly ochreous-whitish . . . . .                      | 2.                  |
| 2. Forewings whitish with fuscous-brown postmedian blotch . . . . . | <i>ostracina</i> .  |
| Forewings pale-ochreous with fuscous median streak                  | <i>securis</i> .    |

57. DASYCHIRA HORSFIELDI.

*Dasychira horsfieldi*, Saund., Trans. Ent. Soc., 1851, p. 162; *Dasychira grotei*, Moore, Lep. E. I. Co., p. 338; *Dasychira arga*, Moore, Lep. E. I. Co., p. 339; *Dasychira kansalia*, Moore, Proc. Zool. Soc., 1879, p. 401; *Dasychira nilgirica*, Hmps., Ill. Het., viii., p. 58, Pl. 141, f. 13, 14; *Teara farenoides*, Luc., Proc. Roy. Soc. Q'land, 1892, p. 75.

♂. 45-48 mm. Head white. Palpi about 1; white, upper part of outer surface blackish. Antennae white, pectinations ochreous-brown. Thorax white with a few fuscous scales, erect mixed with fuscous and brownish. Abdomen deep-ochreous, underside and tuft whitish. Legs whitish; tibiae and tarsi with blackish dots on dorsum. Forewings elongate-oval, costa straight to near apex, thence arched, apex rounded, termen obliquely rounded; white, sometimes partly grey-whitish; slender lines and a few scattered scales fuscous; an irregularly, dentate, sub-basal line; a slightly dentate line from  $\frac{2}{3}$  costa to mid-dorsum; reniform slenderly outlined with fuscous; a denticulate line from  $\frac{3}{4}$  costa to tornus; an interrupted, irregularly dentate, subterminal line; a submarginal line, discontinuous on veins, the terminal ends of which are also fuscous; elia whitish or grey-whitish irrorated with fuscous. Hindwings with termen rounded; deep-ochreous, paler towards termen; sometimes a terminal band of fuscous suffusion; elia whitish sometimes mixed with fuscous. Underside whitish with some ochreous suffusion on basal area of forewings and dorsal area of hindwings; erescentic fuscous discal marks on both wings, sometimes also fuscous postmedian lines.

♀. 98 mm. Forewings with costa rather strongly arched; markings more suffused. Hindwings whitish with a suffused dorsal ochreous blotch.

N.Q.: Cairns, Innisfail, Townsville; Q.: Brisbane. Also from Java, Malay Peninsula, Ceylon, and India.

58. DASYCHIRA OSTRACINA.

*Laelia ostracina*, Turn., Trans. Roy. Soc. S. Aust., 1902, p. 181.

The type, which is the only example I have seen, is a ♀ in poor condition, but there appears to be a large reniform spot outlined with fuscous and with a central fuscous mark preceding the postmedian blotch on forewing. The correct locality is Cape York

## 59. DASYCHIRA SECURIS.

*Psalis securis*, Hb., Zutr., ii., p. 19, f. 291, 292; Moore, Lep. Ceyl., ii., Pl. 115, f. 1; *Arestha antica*, Wlk., List Lep. Brit. Mus., iv., p. 805; *Rigema falcata*, Wlk., op. cit., xxxii., p. 437; *Rigema tacta*, Wlk., op. cit., xxxii., p. 438; *Anticyra approximata*, Wlk., op. cit., xxxii., p. 440.

♂. 40-46 mm. Head and thorax whitish-ochreous. Palpi 3; pale-ochreous with some dark-fuscous irroration on outer surface. Antennae whitish, pectinations pale-fuscous. Abdomen whitish. Legs ochreous-whitish; anterior pair pale-fuscous. Forewings elongate-oval, costa rather strongly arched, apex round-pointed, termen obliquely rounded; ochreous-brown-whitish with a very few, scattered, dark-fuscous scales; a broadly suffused, fuscous, median streak from base becoming indistinct in disc; dorsal area with slight fuscous suffusion; cilia pale-fuscous. Hindwings with termen slightly rounded; ochreous-whitish; cilia ochreous-whitish. Underside ochreous-whitish.

The only ♀ I have seen is one from South Africa sent me by Mr. A. J. T. Janse. It has the forewings narrower than the ♂, costa more strongly arched, apex acutely pointed, termen more oblique; the central streak more pronounced and expanded on termen.

N.Q.: Cairns; Q.: Rockhampton, Duaritga, Brisbane. Also from Java, Ceylon, India, and Africa.

## Gen. 18. LAELIA.

*Laelia*, Stph., Syst. Cat. Brit. Ins., ii., p. 52.

Antennae in ♂ well-developed with very long pectinations; in ♀ abbreviated with very short pectinations. Palpi rather long, porrect; second joint with dense long hairs beneath; terminal joint long (about  $\frac{1}{3}$ ). Thorax and abdomen without crests. Posterior tibiae with two pairs of spurs. Anterior tibiae densely hairy, tarsi also hairy. Forewings with areole present, 8 and 9 stalked from areole, 7 connate or rarely short-stalked, 10 well separate. Hindwings with 3, 4, 5 separate, 6 and 7 stalked, 8 approximated and connected with cell at about  $\frac{1}{3}$ .

Type, *L. coenosa* Hb. from Europe. A genus of some size in the Indo-Malayan and African regions. It differs from *Dasychira* in the much longer terminal joint of palpi, and absence of any thoracic crest.

## 60. LAELIA OBSOLETA.

*Bombyx obsoleta*, Fab., Ent. Syst., iii. (1), p. 463; *Laelia ermaea*, Meyr., Trans. Roy. Soc. S. Aust., xv., 1891, p. 193.

♂. 30-43 mm. Head ochreous. Palpi 3; ochreous. Antennae ochreous-whitish; pectinations very long, fuscous. Thorax and abdomen ochreous-whitish. Legs ochreous. Forewings triangular, costa straight, apex rounded-rectangular, termen straight, scarcely oblique; ochreous-whitish, with slight fuscous tinge; cilia whitish. Hindwings with termen very slightly rounded; as forewings, Underside similar.

♀. 38-44 mm. Palpi 2. Antennae short; pectinations very short (1). Abdomen with tuft and underside whitish. Wings without fuscous tinge; forewings with costa moderately arched.

N.Q.: Claudie River, Cairns, Herberton; Q.: Duaringa, Nambour, Brisbane, Mt. Tambourine; N.S.W.: Sydney.



*Species unrecognised or wrongly referred to the family.*

- 61. *Arca crocata*, Swin., Cat. Oxl. Mus., i., p. 197. Perhaps not Australian.
- 62. *Porthesia ? irrorata*, Luc., Proc. Roy. Soc. Q'land, 1892, p. 77.
- 63. *Artaxa compacta*, Luc., Trans. Nat. Hist. Soc. Q'land, 1894, p. 106.
- 64. *Artaxa usta*, Luc., Proc. Roy. Soc. Q'land, 1901, p. 76.
- 65. *Euproctis pelodes*, Low., Proc. Roy. Soc. S. Aust., xvii., 1893, p. 159. Probably a synonym of *Epicoma tristis* Lew. (*Notodontidae*).
- 66. *Teara erebodes*, Low., Trans. Roy. Soc. S. Aust., xvi., 1892, p. 14. A synonym of *Ochrogaster contraria* Wlk. (*Notodontidae*).
- 67. *Teara coralliphora*, Low., Proc. Linn. Soc. N.S. Wales, 1900, p. 32.
- 68. *Orgyia retinopepla*, Low., Trans. Roy. Soc. S. Aust., 1905, p. 176.
- 69. *Oeneria heliaspis*, Meyr., Trans. Roy. Soc. S. Aust., xv., 1891, p. 192. I have not seen this species.

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<i>canifascia</i>	53	<i>habrostola</i>	32	<i>nephrographa</i>	46	<i>tanaopis</i>	2
<i>ceylanica</i>	53	<i>heliaspis</i>	69	<i>nilgirica</i>	57	<i>togata</i>	34
chionitis	15	<i>hemicalla</i>	14	<i>niphobola</i>	38	<i>transiens</i>	50
<i>chrysothaca</i>	25	<i>hipparia</i>	50	<i>obsoleta</i>	60	<i>trispila</i>	11
<i>chrysophila</i>	13	<i>hololeuca</i>	17	<i>ochrias</i>	41	<i>turneri</i>	45
collucens	49	<i>holoxutha</i>	30	<i>ostracina</i>	58	<i>usta</i>	64
<i>compacta</i>	63	<i>horsfieldi</i>	57	<i>panabra</i>	4	<i>xuthoptera</i>	8
<i>coralliphora</i>	67	<i>hymnalis</i>	28	<i>paradoxa</i>	4		